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## OCTOBER 2001 CONSTRUCTION AT \$863.5 BILLION ANNUAL RATE

Construction put in place during October 2001 was estimated at a seasonally adjusted annual rate of \$863.5 billion, 2 ( $\pm$  5) percent above the revised September estimate of \$847.2 billion, according to the U.S. Commerce Department's Census Bureau. The October figure represents a 5 ( $\pm$  5) percent increase over October 2000.

During the first 10 months of this year \$722.8 billion of construction was put in place, 6 percent above the \$681.8 billion for the same period in 2000.

In constant (1996) dollars, the October annual rate was \$719.6 billion, 2 ( $\pm$  5) percent above the revised estimate of \$708.5 billion for September.

### PRIVATE CONSTRUCTION

Spending on new residential housing units was at a seasonally adjusted annual rate of \$281.6 billion in October, 1 ( $\pm$  2) percent above the revised September estimate of \$280.2 billion. Nonresidential building construction was at a rate of \$199.6 billion, 2 ( $\pm$  3) percent above the revised September estimate of \$196.0 billion.

### PUBLIC CONSTRUCTION

In October, the estimated seasonally adjusted annual rate of public construction put in place was \$205.2 billion, 3 ( $\pm$  5) percent above the revised September estimate of \$198.4 billion.

November 2001 data will be released on January 3, 2002 at 10:00 AM EST.

### EXPLANATORY NOTES

In interpreting changes in the statistics in this release, note that month-to-month changes in seasonally adjusted statistics often show movements which may be irregular. It may take 2 months to establish an underlying trend for total construction and as long as 8 months for specific categories of construction.

The statistics in this release are estimated from several sources and surveys and are subject to sampling variability as well as nonsampling errors including bias and variance from response, nonreporting, and undercoverage. Estimates of the standard errors are provided in Table 4 for selected types of construction. Whenever a statement such as "2 ( $\pm$  3) percent above" appears in the text, this indicates the range (-1 to +5 percent) in which the actual percent change is likely to have occurred. All ranges given are 90 percent confidence intervals. If the range contains zero, it is uncertain whether there was an increase or decrease; that is, the change was not statistically significant. For any comparison cited without a confidence interval, the change is statistically significant. Statistics for the current month are preliminary estimates subject to revision in following months as additional data become available. The average absolute percent changes from preliminary estimate to first revision for the major seasonally adjusted components are as follows: total construction, 0.5 percent; private construction, 0.6 percent; private residential construction, 0.5 percent; private nonresidential construction, 1.1 percent; and public construction, 1.4 percent.

More detailed data will appear in Current Construction Reports, C30/01-10, to be issued later this month. A discussion of sources and reliability of the data appears in Current Construction Reports, C30/01-5.

This press release is available on the date of issue through:

1. The internet at [http://www.census.gov/const/c30\\_curr.html](http://www.census.gov/const/c30_curr.html)
2. The Commerce Department's on-line Economic Bulletin Board (EBB) and STAT-USA/Fax services. For more information, telephone (202) 482-1986.

**Table 1. Value of Construction Put in Place in the United States, Seasonally Adjusted Annual Rate**

[Billions of dollars. Detail may not add to total due to rounding. Percent changes based on unrounded figures]

Type of construction	Oct <sup>p</sup> 2001	Sep <sup>r</sup> 2001	Aug <sup>r</sup> 2001	Jul 2001	Jun 2001	May 2001	Apr 2001	Oct 2000	Percent change Oct 2001 from—	
									Sep 2001	Oct 2000
	Current dollars									
Total construction.....	863.5	847.2	852.8	856.7	861.6	869.6	870.8	820.8	2	5
Private construction <sup>1</sup> .....	658.3	648.8	659.8	661.1	665.3	670.8	677.4	644.8	1	2
Residential buildings <sup>2</sup> .....	398.6	393.6	397.0	390.5	391.5	394.3	392.2	370.3	1	8
New housing units.....	281.6	280.2	280.5	280.0	278.5	278.8	274.7	257.5	1	9
1 unit.....	249.0	248.4	249.1	248.2	247.5	246.8	244.8	230.3	(Z)	8
2 units or more.....	32.6	31.8	31.4	31.8	31.0	32.0	29.9	27.1	2	20
Nonresidential buildings.....	199.6	196.0	201.7	210.7	210.8	211.7	220.6	215.5	2	- 7
Industrial.....	27.7	30.5	31.8	34.6	33.0	31.9	34.7	32.1	- 9	- 14
Office.....	51.3	49.1	49.7	53.6	55.0	55.0	58.8	59.0	4	- 13
Hotels, motels.....	13.7	14.1	14.3	14.9	15.0	14.5	14.9	16.0	- 3	- 15
Other commercial.....	60.4	58.0	61.1	62.2	61.9	63.6	66.1	62.8	4	- 4
Religious.....	8.0	8.2	8.7	8.9	8.7	8.4	8.4	8.2	- 3	- 2
Educational.....	14.7	13.3	12.4	11.6	11.6	12.2	12.4	12.1	11	21
Hospital and institutional.....	15.1	14.3	14.7	15.4	15.7	16.0	15.3	15.2	5	- 1
Miscellaneous buildings.....	8.9	8.6	9.1	9.6	10.0	10.0	10.0	10.1	3	- 12
Telecommunications.....	(NA)	21.1	22.6	22.0	22.4	24.4	22.8	18.0	(NA)	(NA)
All other private.....	2.4	2.6	2.7	2.6	2.5	2.6	2.7	3.1	- 7	- 22
Public construction.....	205.2	198.4	192.9	195.5	196.2	198.7	193.4	176.0	3	17
Housing and redevelopment.....	6.6	6.5	6.0	6.1	6.5	6.5	6.2	5.5	2	20
Industrial.....	1.1	2.0	1.4	1.5	1.4	1.3	1.6	1.1	- 46	- 4
Educational.....	59.0	53.7	51.3	50.3	46.8	50.0	47.8	44.0	10	34
Hospital.....	3.9	4.1	4.2	3.9	3.9	3.8	3.8	3.8	- 4	3
Other public buildings.....	35.7	34.6	31.7	31.9	32.5	32.7	32.2	30.7	3	16
Highways and streets.....	53.8	54.2	55.4	60.3	61.5	60.4	57.7	48.8	- 1	10
Military facilities.....	2.3	2.4	2.5	2.4	2.5	2.3	2.5	1.9	- 1	23
Conservation and development ..	7.6	7.4	7.2	6.1	6.6	7.2	6.3	6.8	3	12
Sewer systems.....	11.0	10.1	10.0	9.9	10.4	10.3	11.0	9.7	8	13
Water supply facilities.....	8.7	8.8	8.0	8.0	8.5	7.7	8.7	7.0	(Z)	25
Miscellaneous public.....	15.4	14.7	15.1	15.1	15.7	16.4	15.6	16.6	4	- 8
	1996 dollars									
Total construction.....	719.6	708.5	714.4	720.5	724.2	733.5	736.0	705.7	2	2
Private construction <sup>1</sup> .....	547.7	541.9	552.2	555.8	559.2	565.2	572.0	554.5	1	- 1
Residential buildings <sup>2</sup> .....	329.2	326.9	330.3	327.0	328.2	330.0	329.0	318.1	1	3
New housing units.....	232.6	232.7	233.3	234.5	233.5	233.3	230.5	221.2	(Z)	5
1 unit.....	205.6	206.3	207.3	207.9	207.5	206.5	205.4	197.9	(Z)	4
2 units or more.....	26.9	26.5	26.1	26.7	26.0	26.8	25.1	23.3	2	16
Nonresidential buildings.....	165.1	162.4	167.4	175.3	174.9	176.6	184.3	182.7	2	- 10
Industrial.....	22.9	25.3	26.4	28.8	27.4	26.6	29.0	27.2	- 9	- 16
Office.....	42.4	40.7	41.3	44.6	45.6	45.9	49.2	50.0	4	- 15
Hotels, motels.....	11.3	11.7	11.9	12.4	12.4	12.1	12.4	13.6	- 3	- 17
Other commercial.....	50.0	48.0	50.7	51.7	51.3	53.0	55.2	53.2	4	- 6
Religious.....	6.6	6.8	7.2	7.4	7.3	7.0	7.0	6.9	- 3	- 5
Educational.....	12.1	11.0	10.3	9.6	9.6	10.2	10.4	10.3	10	18
Hospital and institutional.....	12.5	11.8	12.2	12.8	13.0	13.4	12.8	12.9	5	- 3
Miscellaneous buildings.....	7.3	7.1	7.5	8.0	8.3	8.4	8.3	8.6	3	- 15
Telecommunications.....	(NA)	19.7	21.1	20.6	20.9	23.1	21.7	17.3	(NA)	(NA)
All other private.....	2.1	2.3	2.3	2.2	2.2	2.3	2.4	2.7	- 7	- 23
Public construction.....	171.9	166.6	162.3	164.7	165.0	168.4	164.0	151.2	3	14
Housing and redevelopment.....	5.5	5.4	5.0	5.1	5.4	5.5	5.2	4.7	1	15
Industrial.....	0.9	1.7	1.2	1.2	1.2	1.1	1.3	0.9	- 46	- 6
Educational.....	48.8	44.5	42.6	41.8	38.8	41.7	39.9	37.3	10	31
Hospital.....	3.2	3.4	3.5	3.2	3.3	3.2	3.2	3.2	- 5	(Z)
Other public buildings.....	29.6	28.6	26.3	26.5	27.0	27.3	26.9	26.0	3	14
Highways and streets.....	45.0	45.4	46.5	50.6	51.4	51.0	48.7	41.8	- 1	8
Military facilities.....	1.9	2.0	2.1	2.0	2.1	1.9	2.1	1.6	- 2	20
Conservation and development ..	6.8	6.5	6.4	5.4	5.8	6.5	5.7	6.1	3	10
Sewer systems.....	9.7	9.0	8.9	8.8	9.2	9.2	9.9	8.7	8	12
Water supply facilities.....	7.4	7.4	6.8	6.8	7.2	6.7	7.5	6.1	- 1	21
Miscellaneous public.....	13.2	12.7	13.0	13.1	13.5	14.3	13.6	14.6	4	- 9

NA Not available. <sup>p</sup>Preliminary. <sup>r</sup>Revised. Z Less than 0.5 percent.

<sup>1</sup>Includes the following categories of private construction not shown separately: residential improvements, railroads, electric light and power, gas, petroleum pipelines, and farm nonresidential. <sup>2</sup>Includes improvements.

**Table 2. Value of Construction Put in Place in the United States, Not Seasonally Adjusted in Current Dollars**

[Billions of dollars. Detail may not add to total due to rounding. Percent changes based on unrounded figures]

Type of construction	Oct <sup>P</sup> 2001	Sep <sup>r</sup> 2001	Aug <sup>r</sup> 2001	Jul 2001	Jun 2001	May 2001	Apr 2001	Oct 2000	Year to date		
									Oct 2001	Oct 2000	Percent change
<b>Total construction</b> .....	<b>79.4</b>	<b>79.5</b>	<b>81.5</b>	<b>78.6</b>	<b>78.2</b>	<b>75.3</b>	<b>69.3</b>	<b>75.3</b>	<b>722.8</b>	<b>681.8</b>	<b>6</b>
<b>Private construction</b> <sup>1</sup> .....	<b>60.1</b>	<b>59.7</b>	<b>61.5</b>	<b>59.8</b>	<b>59.9</b>	<b>58.4</b>	<b>54.5</b>	<b>58.8</b>	<b>558.7</b>	<b>534.5</b>	<b>5</b>
Residential buildings <sup>2</sup> .....	36.8	36.9	37.7	36.6	36.6	35.0	31.1	34.3	331.0	314.5	5
New housing units.....	25.5	25.8	26.3	26.0	25.2	24.0	22.2	23.3	232.8	222.6	5
1 unit.....	22.6	23.1	23.5	23.3	22.5	21.2	19.7	21.0	206.8	199.1	4
2 units or more.....	2.9	2.7	2.8	2.8	2.8	2.8	2.5	2.4	26.0	23.5	11
Nonresidential buildings.....	17.7	17.3	18.0	18.2	18.2	18.0	18.0	19.2	176.4	174.2	1
Industrial.....	2.5	2.7	2.8	2.9	2.8	2.7	2.8	2.9	27.1	26.5	2
Office.....	4.5	4.2	4.3	4.5	4.7	4.8	4.9	5.1	46.1	45.5	1
Hotels, motels.....	1.2	1.2	1.2	1.3	1.3	1.2	1.2	1.4	12.4	13.8	- 10
Other commercial.....	5.5	5.4	5.7	5.5	5.4	5.4	5.3	5.8	52.5	51.4	2
Religious.....	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.8	6.9	6.7	3
Educational.....	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	10.6	9.5	11
Hospital and institutional.....	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.3	12.8	11.9	7
Miscellaneous buildings.....	0.8	0.7	0.8	0.8	0.9	0.9	0.9	0.9	8.1	8.9	- 9
Telecommunications.....	(NA)	1.7	2.1	1.8	1.9	2.1	1.8	1.6	(NA)	14.2	(NA)
All other private.....	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	2.2	2.4	- 9
<b>Public construction</b> .....	<b>19.2</b>	<b>19.9</b>	<b>20.1</b>	<b>18.8</b>	<b>18.3</b>	<b>16.9</b>	<b>14.9</b>	<b>16.5</b>	<b>164.1</b>	<b>147.3</b>	<b>11</b>
Housing and redevelopment.....	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.5	5.1	4.3	19
Industrial.....	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	1.2	1.0	29
Educational.....	5.2	5.1	5.4	5.0	4.3	4.0	3.6	3.8	42.1	36.6	15
Hospital.....	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	3.3	3.4	- 2
Other public buildings.....	3.2	3.1	2.8	2.7	2.8	2.8	2.7	2.7	27.0	23.5	15
Highways and streets.....	5.8	6.0	6.7	6.4	6.2	5.4	4.2	5.3	49.0	44.9	9
Military facilities.....	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	2.0	1.9	2
Conservation and development ..	0.5	0.9	0.7	0.5	0.6	0.6	0.5	0.5	6.0	5.0	18
Sewer systems.....	1.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9	8.6	8.7	- 1
Water supply facilities.....	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	6.8	5.8	18
Miscellaneous public.....	1.4	1.5	1.5	1.4	1.4	1.4	1.2	1.6	13.0	12.3	6

NA Not available.    <sup>P</sup>Preliminary.    <sup>r</sup>Revised.    Z Less than 0.5 percent.

<sup>1</sup>Includes the following categories of private construction not shown separately: residential improvements, railroads, electric light and power, gas, petroleum pipelines, and farm nonresidential.    <sup>2</sup>Includes improvements.

**Table 3. U.S. Census Bureau Composite Fixed-Weighted (1996 Weights) Price Index and Implicit Price Deflator**

[1996 = 100]

Period	Fixed-Weighted Index			Implicit Price Deflator		
	1999	2000	2001	1999	2000	2001
January.....	108.4	113.9	117.8	108.5	114.0	117.4
February.....	108.6	114.1	118.3	108.6	114.1	117.7
March.....	109.0	114.0	118.8	109.0	113.9	118.5
April.....	109.3	114.5	118.7	109.3	114.4	118.3
May.....	109.7	114.8	118.9	109.8	114.8	118.6
June.....	110.4	115.0	119.2	110.3	115.1	119.0
July.....	110.6	115.6	119.2	110.5	115.7	118.9
August.....	110.8	115.7	<sup>r</sup> 119.5	110.8	115.8	<sup>r</sup> 119.4
September.....	110.9	116.1	<sup>r</sup> 119.6	110.8	115.9	<sup>r</sup> 119.6
October.....	111.4	116.4	<sup>P</sup> 120.1	111.3	116.3	<sup>P</sup> 120.0
November.....	112.0	116.7		111.8	116.6	
December.....	112.3	117.1		112.1	116.9	
Annual.....	110.3	115.3		110.3	115.4	

<sup>P</sup>Preliminary.    <sup>r</sup>Revised.

Note: The fixed-weighted price index is a weighted average of the individual price index series used to deflate the Value of Construction Put in Place (VIP) series. In calculating the index, the weights (the composition of current dollar VIP in 1996 by category of construction) are held constant. Consequently, the index reflects only changes in prices. The implicit price deflator is a derived ratio of total current to constant dollar VIP (multiplied by 100). It is the average of the individual price indexes used in the deflation of VIP, but the prices are weighted by the composition of VIP each period. As a result, the implicit price deflator reflects not only changes in prices, but also changes in the composition of VIP, and its use as a measure of price change is discouraged.

Table 4. **Relative Standard Errors and Coefficients for Standard Errors of Changes**

Type of construction	Relative standard error (percent)			Coefficient for changes	
	Monthly estimate	Year-to-date estimate	Annual estimate	Month-to-month change (k1)	Year-to-date change (k2)
<b>Total construction</b> .....	<b>2</b>	<b>1</b>	<b>1</b>	<b>.03</b>	<b>.01</b>
<b>Private construction</b> .....	<b>3</b>	<b>1</b>	<b>1</b>	<b>.04</b>	<b>.02</b>
Residential buildings .....	5	2	2	.06	.03
New housing units .....	2	1	1	.01	.01
1 unit .....	2	2	2	.01	.01
2 units or more .....	4	3	3	.03	.03
Nonresidential buildings .....	2	1	1	.02	.01
Industrial .....	3	2	2	.04	.03
Office .....	4	2	2	.05	.03
Hotels, motels .....	7	5	5	.09	.07
Other commercial .....	5	3	2	.06	.04
Religious .....	9	6	5	.12	.09
Educational .....	7	5	5	.10	.07
Hospital and institutional .....	6	5	5	.07	.07
Miscellaneous buildings .....	7	4	4	.09	.06
<b>Public construction</b> .....	<b>2</b>	<b>1</b>	<b>1</b>	<b>.03</b>	<b>.01</b>
Housing and redevelopment .....	8	5	4	.11	.07
Industrial .....	(NA)	(NA)	(NA)	(NA)	(NA)
Educational .....	3	2	2	.04	.03
Hospital .....	6	4	4	.08	.06
Other public buildings .....	3	2	2	.04	.03
Highways and streets .....	4	2	2	.05	.03
Military facilities .....	(NA)	(NA)	(NA)	(NA)	(NA)
Conservation and development .....	4	2	2	.06	.03
Sewer systems .....	6	3	3	.08	.04
Water supply facilities .....	8	4	3	.11	.06
Miscellaneous public .....	8	4	4	.11	.06

NA Not available.

Note: All statistics are based upon 2000 data. The coefficient (k1) for the month-to-month change is applicable to change from the previous month and change from the same month a year ago.

The standard errors (SE) for month-to-month and year-to-date changes may be approximated by the following formula with the appropriate coefficient shown in Table 4:

$$SE(\text{change}) = (k1 \text{ or } k2) (100 + \% \text{ change shown in table}).$$

For example, Table 1 shows that private 'office' construction increased 4 percent from last month. The standard error of the 4 percent increase is about equal to 5 percentage points:

$$SE(4\% \text{ increase}) = (.05)(100+4) = (.05)(104) = 5\%$$

Once the standard error is available, one can construct a 90 percent confidence interval of the change by multiplying the standard error by 1.6. In the above example, an approximate 90 percent confidence interval of the 4 percent increase for private 'office' construction would be between:

$$12 \text{ and } -4 \text{ percent } (4\% \text{ plus or minus } 8\% (5\% \times 1.6)).$$